

Claims

1. A guide element of a web-producing or -processing machine with a plurality of openings (03) for the emergence of a fluid under pressure, wherein the guide element (01) is embodied for guiding or changing the direction of an incoming web (02), characterized in that the guide element (01) has a porous material (01), through which fluid can flow.

2. A guide element of a web-producing or -processing machine with a plurality of openings (03) for the emergence of a fluid under pressure, wherein the guide element (01) can be brought into at least two angular positions in relation to the incoming web (02), characterized in that in every one of the two angular positions the fluid emerges from openings (03) provided on a side around which the web (02) is looped and which faces the web (02), as well as on an opposite away-facing side.

3. The guide element in accordance with claim 1 or 2, characterized in that the openings (03) in the surface area of the guide element (01) are arranged, at least in one longitudinal section of the guide element (01), substantially around the entire circumference.

4. The guide element in accordance with claim 2, characterized in that in both angular positions the fluid emerges from the openings (03) substantially over the entire circumference.

5. A guide element of a web-producing or -processing machine with a plurality of openings (03) arranged on its surface area, at least in one longitudinal section of the guide element (01), substantially around the entire circumference for the emergence of a fluid under pressure, wherein the guide element (01) can be brought into at least two angular positions in relation to an incoming web, characterized in that the openings (03) are embodied as micro-openings (03) of a diameter of less than 500 μm , and that in both angular positions the fluid emerges from the openings (03) in this longitudinal section substantially over the entire circumference.

6. A guide element of a web-producing or -processing machine with a plurality of openings (03) arranged its surface area, at least in one longitudinal section of the guide element (01), substantially around the entire circumference for the emergence of a fluid under pressure, wherein the guide element (01) can be brought into at least two angular positions in relation to an incoming web, characterized in that the openings (03) are assigned to two essentially half-shell-shaped halves of the cylindrical surface area of the guide element (01), to each of which its own hollow space (04) located in the interior is assigned, which can be selectively charged with fluid under pressure.

7. The guide element in accordance with claim 1, 2, 5 or 7, characterized in that the guide element (01) is pivotable around 90°, wherein in a first angular position a first, substantially half-shell-like half of the cylindrical

surface area is clinched by the web (02), and in a second angular position a second half-shell-like half of the surface area is clinched.

8. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that the openings (03) are embodied as micro-openings (03) of a diameter of less than 500 μm .

9. The guide element in accordance with claim 5 or 8, characterized in that the micro-openings (03) are embodied as open pores of a material (06), through which fluid flows.

10. The guide element in accordance with claim 9, characterized in that the pores of the fluid-permeable porous material have a mean diameter between 5 and 50 μm , in particular 10 to 30 μm .

11. The guide element in accordance with claim 9, characterized in that the porous material (06) is embodied as open-pored sinter material (06), in particular as a sinter metal.

12. The guide element in accordance with claim 9, characterized in that the micro-porous material is embodied as a substantially self-supporting hollow body which, by means of its inner boundary surface, forms a hollow space (04) acting as a pressure chamber (04).

13. The guide element in accordance with claim 12, characterized in that the hollow body made of porous material has a wall thickness of at least 2 mm.

14. The guide element in accordance with claim 9, characterized in that the micro-porous material (06) is embodied as a layer (06) on a self-supporting support (07), which is fluid-permeable at least in parts.

15. The guide element in accordance with claim 14, characterized in that on its side facing the layer (06) the support (07) has at least one support surface connected with the layer (06), as well as a plurality of openings (09) for feeding the fluid to the layer (06).

16. The guide element in accordance with claim 14, characterized in that in the area of the support surface the layer (06) has a thickness of less than 1 mm, in particular between 0.05 mm to 0.3 mm.

17. The guide element in accordance with claim 14, characterized in that the support (07) has a plurality of passages (08), which are not particularly connected with each other, over its length and width acting together with the layer (06).

18. The guide element in accordance with claim 14, characterized in that the support (07) is embodied as a

support tube (07) with a hollow profile, in particular a circular-ring-shaped profile.

19. The guide element in accordance with claim 14, characterized in that a wall thickness of the support tube (07) is greater than 3 mm, in particular greater than 5 mm.

20. The guide element in accordance with claim 9, characterized in that a degree of opening on the outwardly directed surface of the porous material (06) lies between 3% to 30%, in particular between 10% and 25%.

21. The guide element in accordance with claim 5 or 8, characterized in that the micro-openings (03) are embodied as outwardly oriented openings (03) of micro-bores (11) in a wall (12) bordering the guide element (01) on the outside.

22. The guide element in accordance with claim 21, characterized in that a diameter of the openings (03) is less than or equal to 300 μm , in particular between 60 and 150 μm .

23. The guide element in accordance with claim 21, characterized in that a wall thickness of the wall (12) is between 0.2 to 3.0 mm.

24. The guide element in accordance with claim 21, characterized in that a hole density, i.e. a number of openings (03) per unit of area of the surface provided with micro-openings, is 0.20 / mm^2 , at least 0.2 / mm^2 .

25. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that 1 to 20 standard cubic meters of air per hour emerge from a square meter of the surface area having the openings (03).

26. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that 2 to 15, in particular 3 to 7, standard cubic meters of air per hour emerge from a surface area having the openings (03).

27. The guide element in accordance with claim 9, characterized in that the porous material (06) is charged from the inside with at least 1 bar of excess pressure.

28. The guide element in accordance with claim 9, characterized in that the porous material (06) is charged from the inside with fluid at an excess pressure of more than 4 bar, in particular 5 to 7 bar.

29. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that a feed line for supplying the fluid to the guide element (01) has an inner cross section of less than 100 mm², in particular between 10 and 60 mm².

30. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that the outer diameter of the guide element (01) is 60 to 100 mm.

31. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that the guide element (01) has a length of more than 1,200 mm.

32. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that the guide element (01) is embodied as a turning bar (01).

33. The guide element in accordance with claim 1, 2, 5 or 6, characterized in that the fluid under pressure is in the form of compressed air.